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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,784	07/10/2003	Kiyoshi Kimura	2018-744	1494
23117 7590 08/24/2005 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER SCHEUERMANN, DAVID W	
			ART UNIT 2834	PAPER NUMBER

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,784

Applicant(s)

KIMURA ET AL.

Examiner

David W. Scheuermann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 6/8/2005 have been fully considered but they are not persuasive. As to the conjecture that there is no bobbin, note the unlabeled bobbin shown in figure 1 of Igarashi, JP 06233483 is located between core 13 and winding 15 (precisely where a bobbin would be located) and appears in this sectional view surprisingly similar to applicants' own sectional view of figure 4. As to applicants remarks that the bobbin is not shown in figure 2 of Igarashi, JP 06233483, this is because the bobbin lies only between the coil and the stator teeth as is evident by the cross-hatching in figure 1 of Igarashi, JP 06233483. Igarashi, JP 06233483, therefor, has a bobbin. Furthermore, terminals or lead wires 15a and 15b extend from the coil/bobbin assembly around each stator tooth. The term bobbin terminal is broad enough to read on bobbin leads 15a and 15b as depicted in figure 2 of Igarashi, JP 06233483. The rejection has been modified to point out that leads 15a and 15b in figure 2 of Igarashi, JP 06233483 correspond to the bobbin terminals as this is where the bobbin winding leads terminate while the first contact portion 35 connects with lead terminal 15a when the stator is accommodated in the housing. Thus, the rejection is proper and is maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless —(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, 8, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Igarashi, JP 06233483. Igarashi discloses:

A rotary electric machine comprising:

a stator (see figure 1) including a stator core having a plurality of teeth and stator coils mounted on the teeth, each said stator coil including a bobbin that is fitted to one of the teeth and a phase coil wound around the bobbin each said bobbin including a bobbin terminal (15a or 15b, see figure 2) for connecting opposite ends of the phase coil; and

a stator housing for accommodating said stator, said stator housing including an insert mold to be connectable to an outside electric device (inherent), each said stator terminal has a first contact portion (35);

wherein each said bobbin terminal has a second contact portion (15a or 15b, see figure 2) in contact with the first contact portion when said stator is accommodated in said stator housing.

As to claim 4, it is inherent that frame 16 holding terminals 32 and 38 is of a resinous non-conducting material to prevent an electrical short.

In re claim 7, note that the coils are grouped into groups as indicated by the three terminals 38.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi in view of Batten et al., US 5770902. Igarashi discloses the invention substantially as claimed as set forth in the rejection supra with respect to claim 1. Igarashi does not expressly disclose; "...wherein said stator housing further comprises ... a metal reinforcement plate for supporting a ball bearing that rotatably supports an end of said rotor.", "...wherein said stator housing has a center bore for supporting said ball bearing, and wherein said center bore has an inside surface the diameter of which is formed with reference to one of an outside diameter and inside diameter of said stator.", or "... further comprising as sensor connector for connecting said sensor terminals to an outside electric device, wherein said stator housing further included rotation angle detector and a plurality of sensor terminals embedded in said insert mold, and wherein said stator terminals and said sensor connector are integrated." Batten et al. disclose or suggest a motor termination board see figure 2, for the purpose of facilitating interconnection of control components and power components in a brushless DC motor (see abstract). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to include a metal ball bearing

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reinforcement plate and control components (note angle sensors 26) in the stator housing of Igarashi as taught by Batten et al. While Batten et al. do not expressly disclose that bearing insert 33 is for a ball bearing, Official Notice is taken that ball bearings used to support a motor shaft are well known in the motor art to reduce rotational friction while rigidly supporting said motor shaft, and as such it would have been obvious to one of ordinary skill in the art to use ball bearings in the motor of Igarashi and Batten et al. One of ordinary skill in the art would have been motivated to do this for facilitating interconnection of control components and power components.

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi, JP 06233483 in view of Katayama, US 5001379. Igarashi, JP 06233483 teaches every aspect of the invention, except, "...wherein a pair of recesses is formed in each bobbin, each for receiving a respective said bobbin terminal," or "...wherein each said bobbin terminal includes a projection projecting towards said first contact surface thereby to define second contact portion," or "...wherein the bobbin terminals and stator terminals are welded to each other at said contact portions thereof..". Katayama, US 5001379 discloses a recess formed in a bobbin, for the purpose of supporting a bobbin terminal 12 having a connection portion 12c and an external connection portion 12f. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to replace lead terminals 15a and 15b of coil/bobbin assemblies of Igarashi, JP 06233483 with terminal pins along with the supporting bobbin structure of Katayama, US 5001379. Furthermore it would have been obvious to solder or weld these terminal pins onto the stator contact portions to

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ensure a vibration-resistant connection and prevent corrosion from reducing the quality of the joint. One of ordinary skill in the art would have been motivated to do this to facilitate assembly and provide a stronger stator assembly.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is 571-272-2035. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached at (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



dws
August 18, 2005



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